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AUTHOR Hill, Robert; And Others
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ABSTRACT

In an effort to mitigate the maldistribution of U.S. physicians, a rural satellite clinic was established in 1973 to serve the 1,239 citizens of Yale, Oklahoma. The clinic was manned by a graduate of the two year Physician's Associate program at the University of Oklahoma who was under the supervision and employ of a pediatrician located 20 miles away. Initially, half of a 20 percent randomly selected sample were personally interviewed to ascertain perceptions and expectations relative to the new clinic. One year later a follow-up study, utilizing the entire sample of 104 households, was conducted to determine patterns of correlates of acceptance and utilization. Concurrently, all clinic records were compiled, tabulated, and analyzed in terms of patient diagnosis, treatment, consultation, age, sex, and fee charged and in terms of clinic costs and revenues. It was concluded that the satellite model was medically feasible. Utilization patterns fell within the expectations of a primary care clinic; patient acceptance was highly favorable; and the physician's assistant operated in the appropriate dependency relationship with his physician employer. However, economic feasibility was not deemed secure under present Federal/State regulations governing physician's assistants. (JC)

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THE PHYSICIAN'S ASSISTANT IN A RURAL SATELLITE CLINIC: REPORT ON AN EVALUATIVE CASE STUDY OF UTILIZATION, ACCEPTANCE AND ECONOMICS*

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Robert Hill, M.A.
Assistant Professor, Department of Family Practice and Community Medicine and Dentistry
University of Oklahoma Health Sciences Center
Oklahoma City, Oklahoma

Allen Holcomb, M.P.H.
Graduate Student, Department of Human Ecology and Environmental Health
University of Oklahoma Health Sciences Center
Oklahoma City, Oklahoma

Frank Wert, PH.D.
Assistant Professor, Department of Economics
Central State University
Edmond, Oklahoma

ABSTRACT: This report discusses data collected during the first year's evaluation of a physician's assistant-manned satellite clinic in rural Oklahoma. Based on an analysis of all medical and business records, plus interviews in 104 randomly selected households, it is concluded that the satellite model is medically feasible: Utilization patterns fell within the expectations of a primary care clinic, patient acceptance was highly favorable, and the physician's assistant operated in the appropriate dependency relationship with his physician employer -- consulting or referring on all but routine medical problems. The satellite model may not be economically feasible, however, under present Federal and State regulations governing third-party reimbursement for services provided by physician's assistants.

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INTRODUCTION

Rural satellite clinics operated by physician's assistants have been suggested as an innovative solution to the worsening national problem of physician maldistribution.[1-4] This paper discusses an evaluative study of one such clinic in the midwest.

BACKGROUND

In early December 1973, a satellite clinic opened its doors to the 1,239 citizens of Yale, Oklahoma. A recent graduate of the two year degree Physician's Associate program in the College of Medicine at the University of Oklahoma mans the clinic under the formal supervision and employ of a pediatrician located in the larger town of Stillwater, twenty miles away. The working relationship between the two men began during the PA's preceptorship in the last eight weeks of his training and continued after his August 1973 graduation.

The Yale Clinic was born out of their interest in testing the satellite model, and in offering the PA the wider range of medical problems for which he had been trained. A Stillwater internist was recruited to provide consultative back-up for general medical problems.

Since Yale was without a physician and had little hope of attracting one, the Oklahoma State Board of Medical Examiners granted approval on a trial basis. With responsibility for regulating PA practice under recent State law,[5] the State Board held that a test of the satellite model was important, but insisted that the PA continue to reside and work in Stillwater so that supervision and consultation could be facilitated. The Board feared that a twenty-four hour demand on his services while remote from his physician employer might jeopardize the PA's legally defined dependent function. The residential limitation also was consonant with the needs of the employing physician, who thereby retained immediate coverage for his Stillwater practice when away and the sharing of "night calls." The PA works in the Stillwater Practice several hours each afternoon after closing the Yale clinic; the physician travels to Yale one morning each week. The total weekly combined man-hour commitment to the Yale clinic is twenty-five hours for the PA and three hours for his employer.* Slightly longer days of seven hours in Yale were cut back after the first two months demonstrated that they made no difference in number of patients seen.

METHODS

Two weeks after the opening of the satellite clinic, a household survey was conducted by a masters candidate from the College

*NOTE: On Wednesdays and Sundays there is no immediate care in Yale, Wednesday being the day the PA drives 70 miles to the Oklahoma University Health Sciences Center to teach a course in Laboratory Medicine and Clinical Procedures to first year PA students, and to take part in hospital rounds or other interesting clinical presentations.

of Health. Half of a 20% random sample was interviewed to determine perceptions and expectations concerning the new clinic; and to measure, if possible, the existing patterns of health care seeking.[6] A follow-up survey was conducted one year later with the entire sample of 104 households, to determine patterns and correlates of acceptance and utilization.

Concurrently, beginning in the late summer of 1974, compilation, tabulation, and analysis of all the clinic's medical records was begun. Each patient encounter was coded for computer analysis containing pertinent information on diagnosis, treatment, consultation, age, sex, and fee charged. Additional analyses during the same period focused on the clinic's business records to determine total costs, revenues, and other economic and social information.

RESULTS

As shown below in Table 1, 2,415 medical encounters were recorded in the satellite clinic during the first year of operation.

TABLE 1

CLINIC ENCOUNTERS BY MONTH

December	170
January	232
February	308
March	224
April	210
May	162
June	179
July	178

(cont'd.)

August		173
September		179
October		288
November		112
	TOTAL	2,415

The monthly figures vary from a high of 308 in February, to a low of 112 in November. This represents an average of approximately two patient encounters per clinical man-hour and reflects an overall under-utilization of the clinic. During February, with about 75 encounters recorded each week, average encounters per clinical man-hour increased to only 3. Total encounters by week are shown below in Table 2.

TABLE 2

CLINIC ENCOUNTERS BY WEEK

WEEK	TOTAL ENCOUNTERS	WEEK	TOTAL ENCOUNTERS
1	16	27	37
2	45	28	59
3	39	29	36
4	34	30	19
5	51	31	49
6	55	32	41
7	49	33	52
8	75	34	44
9	69	35	33
10	71	36	44
11	81	37	34
12	85	38	36
13	65	39	59
14	43	40	42
15	54	41	32
16	47	42	37
17	40	43	42
18	54	44	44
19	47	45	61
20	58	46	118
21	31	47	45
22	47	48	12
23	35	49	40
24	31	50	27
25	34	51	22
26	45	52	49

Table 3 shows the site variation in patient encounters: most took place in the office, phone calls followed in frequency and 71 home visits were recorded -- 78.9% of these latter were with individuals over the age of 70.

TABLE 3

CLINIC ENCOUNTERS BY SITE

SITE	ENCOUNTERS NUMBER	PERCENT
Office	2,188	(90.6)
Phone Call	147	(06.1)
Home Visit	71	(02.9)
Other	9	(00.4)
	2,415	(100.0)

Multi-problem encounters made up about 13% of the total as shown below in Table 4.

TABLE 4

CLINIC ENCOUNTERS BY NUMBER OF PROBLEMS

NUMBER OF PROBLEMS	ENCOUNTERS NUMBER	PERCENT
1 Problem	2,109	(87.3)
2 ''	254	(10.5)
3 ''	39	(01.6)
4 ''	10	(00.4)
5 ''	3	(00.1)
	2,415	(99.9)

The figures are low compared to the 50% level of multi-problem encounters recorded in a Los Angeles primary care clinic by Zukin et al.[7] and in a study of general practice in Massachusetts by Brown et al.[8]

TABLE 5

CLINIC ENCOUNTERS BY AGE AND SEX

AGE	MALE NO.	%	FEMALE NO.	%	TOTAL NO.	%
0 - 5	282	(25.0)	208	(16.1)	490	(20.3)
6 - 10	133	(11.9)	84	(06.5)	217	(09.0)
11 - 20	191	(17.0)	207	(16.0)	398	(16.5)
21 - 30	107	(09.5)	169	(13.1)	276	(11.4)
31 - 40	72	(06.4)	152	(11.8)	224	(09.3)
41 - 50	73	(06.5)	87	(06.7)	160	(06.6)
51 - 60	66	(05.9)	90	(7.0)	156	(06.5)
61 - 70	84	(07.5)	124	(09.6)	208	(08.6)
Above 70	113	(10.1)	173	(13.4)	286	(11.8)
TOTALS	1121	(46.4)	1294	(53.6)	2415	(100.0)

Table 5, which lists clinic encounters by age and sex, indicates that all age groups and both sexes were well represented. About half of the practice fell in the pediatric range, however. Utilization figures become more significant when seen in conjunction with independently gathered data from the year end household survey. As shown in Table 6 satellite clinic users are much more likely to be younger than non-users.

TABLE 6

CLINIC UTILIZATION BY AGE CATEGORIES

AGE CATEGORIES	% OF USERS	% OF NON-USERS
0 - 19	42.6	20.4
21 - 59	41.3	41.7
61 and Over	I5.9	37.9

Users are also more likely to have higher incomes, as shown in Table 7:

TABLE 7

CLINIC UTILIZATION OF INCOME CATEGORIES

INCOME CATEGORIES	% USERS	% NON-USERS
$ 4,999 or less	22.2	42.0
5,000 - 9,999	59.2	38.0
10,000 or more	18.6	18.0

User households are also larger than non-user households. These figures and others comparing user and non-user household characteristics are presented in Table 8.

TABLE 8

CLINIC UTILIZATION BY SELECTED CHARACTERISTICS

CHARACTERISTICS	% USER (n=54)	% NON-USER (n=50)
Mean Age	48.7	55.9
Mean Education	11.0	10.5
Mean Number of Years in Yale	21.2	22.0
Number of Persons in Household	3.3	2.1
Have Family Physician	94.4	84.0
Visit Family Physician:*		
Once a year or less	39.5	39.8
2-3 times per year	48.0	41.7
Once per month	8.4	14.6
More than once per month	3.9	3.9
Have Been Referred by Family Physician to Other Physicians	16.6	12.0

*Percents computed on total individuals: 177 in user household, 103 in non-user households.

(cont'd.)

CHARACTERISTICS	% USER (n=54)	% NON-USER (n=50)
Judge Health Status As:		
Never sick	24.1	32.0
Hardly ever sick	31.5	55.3
So-so	24.1	8.7
Just fair	11.1	1.9
Sick often	9.2	1.9
Travel to Nearby Towns to See:		
Family Physician:		
Cushing (14 miles)	44.4	42.0
Drumright (12 miles)	11.1	24.0
Stillwater (20 miles)	14.8	08.0
Pawnee	00.0	08.0
Other	29.6	18.0
Transportation to Physician:		
Drive car	88.8	78.0
Family member drives	07.4	12.0
Friend drives	01.9	02.0
Walk	01.9	00.0
Other	00.0	08.0

The figures suggest that, despite differences in age and income, users and non-users have much in common: education level, number of years lived in Yale, and a family physician in the nearby town of Cushing whom they drive to see once or twice a year for non-critical health problems and maintenance.

TABLE 9

CLINIC ENCOUNTERS BY PROBLEM FREQUENCY

PROBLEM	FREQUENCY	PERCENTAGE OF TOTAL PRACTICE
Upper Respiratory Infection	448	16.1
Progress Check	388	13.9
Check-Up	285	10.2
Bronchopneumonia	194	6.9
Otitis Media	153	5.4
Other GI (other than Gastroenteritis)	145	5.2
Rashes (other than allergic)	137	4.9
Trauma	133	4.7
Hypertension	122	4.3
Musculoskeletal-Nontrauma	107	3.8
Genito-Urinary	70	2.5
Major Heart Disease	65	2.3

(cont'd.)

PROBLEM	FREQUENCY	PERCENTAGE OF TOTAL PRACTICE
Nervousness	62	2.3
Complicated Medical	53	1.9
Obesity	52	1.8
Pus Collections	50	1.8
Allergic Rashes	39	1.3
Asthma	39	1.3
Peripheral Vascular Disease	33	1.1
Diabetes	28	1.0
Neurological Disorders	27	0.9
Psychological Problem	25	0.9
OB-GYN Infection	23	0.8
Menstrual Problems	19	0.6
Gastroenteritis	17	0.6
Thyroid Disorder	15	0.5
Cancer of any kind	12	0.4
Warts	11	0.4
Second Degree Burn	11	0.4
Impotence	3	0.1
Appendicitis	1	0.0
Hemorrhoids	1	0.0
TOTAL	2,789	

Table 9 above shows a tabulation of health problems identified at the satellite clinic in rank order, and the percent each disease category is of the practice content. The figures are very similar to figures from general primary care practices elsewhere.[7-10] Likewise, PA actions on these problems (see Table 10) are within the expected range for primary care.

TABLE 10

CLINIC ENCOUNTERS BY P. A. ACTIONS

ACTIONS	FREQUENCY	% OF TOTAL ACTIONS	% OF TOTAL PROBLEMS (2789)	%OF TOTAL ENCOUNTERS (2415)
Oral Medication (M.D. Ordered)	932	21.2	33.4	38.6
Medical Procedure (including Immunizations)	893	20.4	32.0	37.0
Advising or Counseling of Patient	671	15.3	24.1	27.8
Appointment with clinic	560	12.8	20.1	23.2
Injection	416	9.5	14.9	17.2
Referral	228	5.5	8.2	9.4
Culture	227	5.2	8.1	9.4

(cont'd.)

ACTIONS	FREQUENCY	% OF TOTAL ACTIONS	% OF TOTAL PROBLEMS (2789)	%OF TOTAL ENCOUNTERS (2415)
Other Lab Procedures	170	3.9	6.1	7.0
Counseling of Family Member(s)	145	3.3	5.2	6.0
Well-Child Exam	51	1.2	1.8	2.1
Surgical Procedure	44	1.0	1.6	1.8
Urinalysis	25	0.6	0.9	1.0
Upper GI Series	2	0.0	0.1	0.1
Blood Count or Sedimentation Rate	2	0.0	0.1	0.1
Mental Health Referral, Psychology	0	0.0	0.0	0.0
Prenatal Exam or Conference	0	0.0	0.0	0.0
TOTALS	4,381			

Table 11 shows that the use of medical consultation by the PA averaged 14.0% per fee assessed encounter during the year and was relatively stable from month to month. This is a rate quite close to that found in a similarly manned PA satellite clinic in Gilchrist County, Florida;[11] and also close to that found in a variety of HMO clinics.[12,13] Most of the Yale PA's consultations were by phone. The figures ignore numerous informal consultations not entered into patient records.

While the consultation rate in Yale remained fairly constant, a significant shift in locus is observable away from the sponsoring physicians, pediatrician A and internist B, and toward "other" Stillwater physicians. In the last six months, for example, 51 (49%) of the 109 consultations were with "other physicians", 33 (31.7%) with physician B, and 17 (12.1%) with physician A. Likely this shift represents a widening acceptance of the PA as a medical colleague among the various medical specialties and his growing confidence in his professional skills. While it is not the equivalent of outcome data as a measure of quality of care, such as that used

TABLE 11

PA CONSULTATION RATE

MONTH	TOTAL FEE ASSESSED ENCOUNTERS	CONSUL. WITH PHYSICIAN A NO.	%	CONSUL. WITH PHYSICIAN B NO.	%	CONSUL. WITH OTHER PHYSICIAN NO.	%	TOTAL CONSULTANT NO.	%
Dec.	94	6	(6.4)	14	(14.9)	7	(7.4)	27	(28.7)
Jan.	192	5	(2.6)	16	(8.3)	1	(0.5)	22	(11.5)
Feb.	253	3	(1.2)	17	(6.7)	8	(3.2)	28	(11.1)
Mar.	184	4	(2.2)	16	(8.7)	12	(6.5)	32	(17.4)
Apr.	173	3	(1.7)	20	(11.6)	8	(4.6)	31	(17.9)
May	133	6	(4.5)	14	(10.5)	8	(6.0)	28	(21.1)
Jun.	147	4	(2.7)	3	(2.0)	11	(7.5)	18	(12.2)
Jul.	146	1	(0.7)	8	(5.5)	5	(3.4)	14	(9.5)
Aug.	142	4	(2.8)	1	(0.7)	11	(7.7)	16	(11.3)
Sep.	147	3	(2.0)	4	(2.7)	13	(8.8)	20	(13.6)
Oct.	237	3	(1.3)	13	(5.5)	6	(2.5)	25	(10.5)
Nov.	92	2	(2.2)	4	(4.3)	5	(5.4)	11	(11.9)
TOTAL	1,940	44	(2.3)	130	(6.7)	99	(5.1)	173	(14.0)

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in the Burlington Randomized Trial,[14] the PA consultation rate in Yale is suggestive.

Another quality of care measure -- decidely in the subjective realm, but nonetheless important -- is patient acceptance. Based on our year end household survey, 96% of those who had used the PA for services were satisfied with the treatment they received. About a third of these users (32.7%) offered the PA's name in response to an early question asking respondents to identify their "family doctor".

Personal qualities associated with acceptance differ as shown in Table 12:

TABLE 12

MOST IMPORTANT REASONS GIVEN FOR ACCEPTANCE OF RESPONDENTS' MEDICAL PRACTITIONER

PHYSICIAN	%	PHYSICIAN'S ASSISTANT	%
He listens to me	48.5	Clinic is close to home	48.2
He can find what's wrong	22.7	He sees me right away	14.5
Other (miscellaneous)	17.5	He listens to me	13.6
Convenience	5.2	Other (miscellaneous)	13.6
Doesn't overcharge	3.1	Doesn't overcharge	7.4
Sees me quickly	3.1	He can find what's wrong	3.7

To most Yale residents, the physician's most endearing qualities appear to be his ability to listen and to make proper diagnoses. Endearing qualities of the PA, on the other hand, are defined in terms of his accessibility.

Despite these perceptual differences, 742 Yale residents used the half-time satellite clinic during its first year of operation.

According to 1970 census figures, this makes up 60% of the town, the same percentage recently reported for a nurse practitioner operated rural satellite clinic in New Mexico.[15]

Table 13 below shows that the majority of the Yale clinic's users (48.1%) made only one encounter during the first year:

TABLE 13

CLINIC ENCOUNTERS BY FREQUENCY OF INDIVIDUAL USE

NO. OF ENCOUNTERS	NO. OF INDIVIDUALS	PERCENT
1	439	48.1
2	201	22.0
3	84	9.2
4	57	6.2
5	39	4.3
More than 5	93	10.1

Does this suggest that 439 individuals were dissatisfied with their initial visit? A more thoughtful interpretation might hold that one year is too short a time to measure acceptance in this manner. Only those who used the clinic on opening day, could be so evaluated. About one-fourth of the total users did not enter the practice until after July, 1974. Moreover, as shown in Table 8, 40% of the repsondents in the household survey report visiting a physician only once a year or less. This corresponds with the traditional practice of self-treatment uncovered in our initial community survey.[6] Therefore, it probably says little about patient acceptance of the PA.

Because of under-utilization, the satellite clinic in Yale suffered a substantial economic loss during its first year. Tables

14 through 17 present summaries of clinic costs, number of fee assessed encounters, average fee assessed, mode of payment, and average clinic cost per fee assessed encounter.

Table 14 shows that the total costs of the clinic were $22,016.24. Salary costs for the PA and receptionist account for 70.1 percent of this total. Medical supplies (8.3%) and lab work (4.4%) constitute two other relatively significant costs. Table 15 shows the number of fee assessed encounters during the year as 1,940, or 84% of the total encounters. The average annual net collectable fee (based on an estimated 86% collection rate) is $6.11. This average fee is quite low compared to primary care clinics in the public funding sector, but likely close to the average fee for rural primary care in the private sector.[16]

Mode of payment disposition is shown in Table 16. The average clinic cost per patient encounter, presented by month in Table 17, demonstrates why the Yale Clinic has been unprofitable for the employing physician. Despite an average net loss of $4.14 per patient encounter, the satellite clinic in Yale provided an average of 200 medical services per month at almost one-third the cost of similar services elsewhere.[15] Table 17 also shows that when utilization is highest, as in the months of February and October, the average clinic costs approach a break-even point. A linear regression analysis confirms that 336 paying encounters per month are needed for the clinic to break even. Since the clinic has seldom averaged more than 3 patients per man-hour during any given week, a much higher encounter load is obviously within the clinic's capacity.

TABLE 14
CLINIC COSTS BY MONTH AND COST CATEGORY*
NOVEMBER, 1973 - NOVEMBER, 1974

Cost Category	November	December	January	February	March	April	May	June
A. Equipment								
1. Medical	$490.00	$75.00			$15.73			$18.00
2. Other	29.12	143.74	$10.78	$20.00	7.62	$113.99		
B. Supplies								
1. Medical		413.65[1]	52.49	168.30	250.39	179.19	$33.36	28.97
2. Other	40.87	49.10			26.69		123.46	7.20
C. Rent	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
D. Labor								
1. P.A.	781.70	1010.61	952.33	1024.61	937.04	950.48	953.03	937.60
2. Recep/Sec.		273.28	273.28	273.28	273.28	223.24	223.24	261.89
E. Utilities								
1. Gas		6.34	12.78	29.20	22.04	14.53	14.58	3.26
2. Utilities			15.59	23.30	20.68	18.62	21.33	
3. Telephone			41.63	47.32	45.33	45.03	49.12	36.88
F. Other			39.11	25.80	230.98[2]	19.88	52.85[3]	28.00
G. Lab Work			33.75	43.50	109.05	67.20	53.55	341.45
H. Interest on Loan						42.50		63.75
TOTALS:	1411.69	2041.72	1501.74	1725.31	2008.83	1744.66	1594.52	1797.00

*Actual historical accounting costs taken from check registry

[1]Adjusted for refund of over payment made in June.

[2]Includes $200.00 donation to Stillwater Hospital.

[3]Includes $25.00 donation to Yale Chamber of Commerce.

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(Continuation)

TABLE 14
ACTUAL MONTHLY COST SUMMARY, BY COST CATEGORY*
NOVEMBER, 1973 - NOVEMBER, 1974

Cost Category	July	August	September	October	November	Totals
A. Equipment						
1. Medical						$598.73
2. Other			$15.00			340.25
B. Supplies						
1. Medical	$151.34	$121.52	17.01	$139.26	$291.13	1846.61
2. Other	13.20	57.03	14.92		19.69	352.16
C. Rent	70.00	70.00	70.00	70.00		840.00
D. Labor						
1. P.A.	939.10	927.37	927.37	1060.31	923.48	12325.03
2. Recep/Sec.	261.89	263.99	263.99	263.99	263.99	3119.34
E. Utilities						
1. Gas	2.04		2.13	2.07	3.57	112.54
2. Utilities	61.31	50.99	48.67	46.14	31.03	337.66
3. Telephone	44.58	47.95	55.80	34.12	39.45	487.21
F. Other	5.00	18.00	32.75	17.80	27.74	497.91
G. Lab Work	128.50	35.30	23.00	23.00	104.25	962.55
H. Interest on Loan		42.50		47.50		196.25
TOTALS:	1676.96	1634.65	1470.64	1704.19	1704.33	22016.24

*Actual historical accounting costs taken from check registry.

TABLE 15

CLINIC NET FEES AND REVENUES

	Practices Charges Minus Adjustments (Net fees assessed)		Number of Paying Encounters	
December	$ 629.80		94	
January	1,180.70		192	
February	1,770.10		253	
March	1,096.20		184	
April	1,152.40		173	
May	1,296.70		133	
June	1,062.80		147	
Subtotals		$8,188.70		1,176
July	1,024.30		146	
August	944.75		142	
September	1,045.70		147	
October	1,762.75		237	
November	822.00		92	
Subtotals		$5,599.50		764
TOTALS	$13,788.20		1,940	

Average Net Fee = *collection rate x Net Fee / Number of encounters

December - June Average = $5.99

July - November Average = $6.30

December - November Average = $6.11

* estimated at 86%

Total Revenue = Average Net Fee x Number of paying encounters

TABLE 16

CLINIC ENCOUNTERS BY MODE OF PAYMENT

MODE OF PAYMENT	FEE ASSESSED ENCOUNTERS NUMBER	PERCENT
Pay at door	844	42.4
Pay within 60 days	290	14.6
Pay within 90 days	109	5.5
Delinquent or Deferred*	746	37.5

*Deferred because they had not yet had time to respond to billing.

TABLE 17

AVERAGE CLINIC COST PER PATIENT ENCOUNTER BY MONTH

MONTH	# OF FEE ASSESSED ENCOUNTERS	CLINIC COSTS	AVERAGE CLINIC COST PER ENCOUNTER
December	94	$1,649.77	$17.55
January	192	1,802.10	9.39
February	253	1,951.06	7.71
March	184	1,753.57	9.53
April	173	1,707.87	9.87
May	133	1,627.43	12.24
June	147	1,678.27	11.48
July	146	1,718.92	11.77
August	142	1,694.47	11.92
September	147	1,710.01	11.63
October	237	1,949.18	8.22
November	92	1,593.82	17.32
	1,940	$20,836.47*	$10.25

*Does not include $1,179.77 of total costs, due to 24 month amortization of start-up equipment, and start up salary costs for the P.A. during November of 1973.

Our study demonstrates that satellite clinics manned by properly trained physician's assistants are medically feasible: Utilization patterns fall within the expectations of a primary care clinic, patient acceptance is highly favorable, and the PA is seen to operate in the appropriate dependency relationship with his physician employer.

In contrast, the economic feasibility of the satellite clinic is another matter. Despite low average costs for providing care, the privately owned and operated Yale Clinic is seen as an economic failure in its first year. How can this be explained? The answer may lie in federal and state regulations governing reimbursement for services provided by physician's assistants under Medicare and Medicaid. As presently interpreted, PA services are not reimburseable unless each encounter is personally supervised by the employing physician.

Several statistics support our belief that the reimbursement issue is critical. In the first place, non-users of the clinic are significantly older than users (see Table 6). This suggests that those eligible for Medicare coverage are not equally represented in the clinic's practice. Other data from the household survey supports this view: 34.0% of non-users have Medicare coverage as compared with only 22.2% of the users. Of the latter, 83.3% are over 70.

The PA and his employer became sensitive to the Medicare problem when the Social Security Administration rejected reimbursement claims. A new clinic policy was initiated: the PA would continue to provide services, and Medicare covered patients were advised that when they received a bill, they should discount it by 50% before paying. An audit of the clinic's business records indi-

cates that 46 accounts were labeled "Medicare." Table 18 below shows how these special accounts were handled:

TABLE 18

"MEDICARE" ACCOUNTS BY PAYMENT DISPOSITION

INDIVIDUAL PAYMENT PLAN	NUMBER	%*
No discount	34	6.9
20% discount	1	0.2
50% discount	11	2.2
	46	9.3

PAYMENT DISPOSITION	NUMBER	%**
Paying in full	42	91.3
Paying 50%	2	4.3
Paying less than 50%	1	2.2
Paying nothing	1	2.2
	46	100.0

*Percents calculated on total clinic accounts of 494.
**Percents calculated on total number in each special economic category.

Interestingly, most Medicare covered users chose to pay their bills in full.

Secondly, as revealed in the survey, non-users of the clinic are more likely to have lower incomes than users.* This suggests that those eligible for care under Medicaid are equally under-represented. This is supported by independently gathered indirect data. Table 19 below shows how Yale compares with 4 other small rural Oklahoma towns where a recent graduate of the Oklahoma Uni-

*See Table 7

versity Physician's Associate Program operates a private practice with a general practitioner. The data were collected by personal communication and statistics provided by the Oklahoma Department of Institutions, Social and Rehabilitative Services.[17]

TABLE 19

MEDICARE AND MEDICAID IMPACT ON SELECTED RURAL CLINICS

TOWN	POPULATION	% RECEIVING PUBLIC ASSISTANCE	ESTIMATED WEEKLY ENCOUNTERS	ESTIMATED %MEDICAID IN PRACTICE	ESTIMATED %MEDICARE IN PRACTICE
Yale	1,239	13.0	50	2.0	20.0
Coalgate	1,859	25.0	250	75.0	7.0
Marlow	3,995	12.0	250	20.0	50.0
Checotah	3,074	28.0	600	25.0	60.0
Stilwell	2,134	73.0	250	20.0	20.0

Unfortunately, few evaluative studies of primary care practice present more than token economic data. In the case of PA manned satellite clinics the reason is usually that most employing or supervising physician are "signing-off" on federal and state third-party reimbursements for services provided by physician's assistants. The reason is not solely economic, although economic considerations appear paramount. If a physician has sufficient confidence in a PA to hire him, he would expect full compensation for what he believes to be quality health care delivery.

Another possible reason for an under-reporting of economic data has to do with "dollar" accountability -- particularly in the public sector. Adequate health care may indeed be a right; but in

a health care delivery system where the suppliers control the demand, so too is the right of all of us to know where the "dollars" are being spent. Producing more doctors, building more hospitals, purchasing more elaborate equipment, are enormously expensive and may only make the system worse.[18] The decentralization of health care through a greater use of Physician's Assistants continues to hold promise. But until greater attention is paid to the economic issue, the issues of utilization and acceptance remain clouded.

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